

CLAIMS

1. A portable electronic controller adapted for controlling the operation of external electronic devices, the portable electronic controller comprising:

a communication component;

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an integral display operatively connected to said communication component;

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an operator input component operatively connected to said integral display;

a processing component operatively connected to said operator input component, to said communication component and to said integral display;

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wherein the communication component has a software interface common with the external electronic devices to be controlled; wherein the communication component communicates with said external electronic devices via said common software interface to receive data from and to send data and control signals to said external electronic devices, wherein said control signals control the operation of selected ones of said external electronic devices; and wherein the processing component processes an operator's input to the operator input component and the data received by the communication component to formulate said control signals to be sent by said communication component for controlling said external electronic devices.

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2. The portable electronic controller of claim 1, further comprising:

a data storage component operatively connected to said communication component and to said processing component and able to store an operator's input to said operator input component and data received by said communication component.

3. The portable electronic controller of claim 2, wherein said electronic controller is selectively connectable to an external display screen for displaying said stored data on said display screen.

4. The portable electronic controller of claim 2, wherein said data storage component stores said operator's input, wherein said processing component includes an algorithm characterized by the ability to compare operator input being processed with stored operator input and thereby identify repeated processing of substantially identical operator input and respective formulation of substantially identical control signals, and wherein said processing component selectively formulates such a substantially identical control signal to be sent by said communication component in the absence of an operator's input.

5. The portable electronic controller of claim 4, wherein said processing component further processes time data, wherein said time data is received by said communication component from one of said external electronic devices or is relayed to said processing component by a clock mounted to said portable electronic controller and operatively connected to said processing component, wherein said algorithm is further able to identify the times of entry of said identical operator input based upon said time data, and wherein said selective formulation of said identical control signal to be sent in the absence of an operator's input is correlated with said identified times of entry.

6. The portable electronic controller of claim 2 in combination with the external electronic devices, wherein said communication component and at least one of such external electronic devices have a common communication protocol permitting

5 said communication component to receive data from said at least one of said external electronic devices, and wherein said data is stored in said data storage component and processed by said processing component to establish said common software interface, thereby permitting said communication component to send data and control signals to said at least one of said external electronic devices.

7. The portable electronic controller of claim 2, further comprising:

5 a sensor mounted to the controller and operatively connected to said data storage component, wherein said sensor measures a surrounding condition, wherein said sensor sends data representing said surrounding condition to said data storage component, and wherein said processing component processes said data representing said surrounding condition in formulating said control signals.

8. The portable electronic controller of claim 1 including the external electronic devices, wherein said external electronic devices are operatively connected to form a network, and wherein said external electronic devices are operatively connected to said common software interface via said network.

9. The portable electronic device of claim 1 in combination with the external electronic devices, wherein the external electronic devices are located in a first surrounding environment, wherein the first surrounding environment includes and is at least partly defined by at least a first area and a second area, wherein the first and second
5 areas are different from one another, wherein said external electronic devices include a first set of external electronic devices located in said first area and a second set of external electrical components located in said second area;

10 wherein the data received by said communication component from said external electronic devices includes a listing of said first and second areas; wherein said

listing of said areas is displayed on said integral display, wherein an operator's input to said operator input component includes a selection of one of said listed areas;

15 wherein the data sent to said external electronic devices from said communication component includes said selection of one of said listed areas, and wherein said selection establishes operational control of said external electronic devices in said one of said listed areas by said control signals sent from said communication component.

10. The portable electronic controller of claim 9, wherein the operational control established in said one of said listed areas by said selection excludes another portable electronic controller from establishing operational control of said one of said listed areas.

11. The portable electronic controller of claim 1 in combination with the external electronic devices:

5 wherein said external electronic devices are located in a first surrounding environment, wherein said electronic controller is portable to a second surrounding environment, wherein other external electronic devices are located in said second environment;

10 wherein said communication component and said other external electronic devices have said common software interface;

wherein said communication component communicates with said other external electronic devices via said common software interface to receive data from and to send data and control signals to said other external electronic devices , wherein said

- 15 control signals sent to said other external electrical components control the operation of
selected ones of said other external electronic devices; and

wherein said processing component processes an operator's input to said
operator input component and the data received by the communication component to
20 formulate said control signals to be sent by said communication component for
controlling said other external electronic devices.

12. The portable electronic controller of claim 1, wherein said external
electronic devices are located on a vehicle, and wherein said external electronic devices
are selected from the group consisting of an on-board engine diagnostic unit, on-board
sensors, a vehicle video system, a vehicle audio system, a vehicle heating, ventilation and
5 air conditioning (HVAC) system, display screen, vehicle windows, and vehicle seats.

13. The portable electronic controller of claim 1, wherein said external
electronic devices are selected from the group consisting of a satellite-based navigation
system, a phone, a satellite-based entertainment system, an Internet access component,
and a digital broadcast system.

14. The portable electronic controller of claim 1, wherein said external
electronic devices are located at a building and are selected from the group consisting of
an audio system, a security system for the building, lighting for the building and
electronic appliances.

15. The portable electronic controller of claim 1, wherein said
communication component receives said data from and sends said formulated control
signals to said external electronic devices in a plug-and-play manner.

16. The portable electronic controller of claim 1, wherein said communication component receives said data from and sends said formulated control signals to said external electronic devices in a wireless manner.

17. The portable electronic controller of claim 1, wherein said external electronic devices are located on a vehicle, and further comprising:

5 a second electronic controller mounted to the vehicle and able to receive operator input and data from said external electronic devices, and further able to send control signals to said external electronic devices for controlling the function thereof;

10 a vehicle operation sensor mounted to the vehicle for sensing when the vehicle is being driven;

a lockout component operatively connected to said vehicle operation sensor and to said second electronic controller;

15 wherein said lockout component prevents said second electronic controller from sending control signals to at least one of said external electronic devices when said vehicle operator sensor senses that the vehicle is being driven.

18. A vehicle including:

a structure frame;

5 a portable electronic controller adapted for controlling the operation of external electronic devices;

electronic devices external to the portable electronic controller and
mounted with respect to the structural frame and able to send data and receive control
10 signals;

wherein the portable electronic controller includes:

a communication component able to send and receive data and send
15 control signals; an integral display operatively connected to said communication
component; an operator input component operatively connected to said integral display; a
processing component operatively connected to said operator input component, to said
communication component and to said integral display; a data storage component
operatively connected to said communication component and to said processing
20 component and able to store an operator's input to said operator input component and
data received by said communication component;

wherein said communication component and said external electronic
devices have a common software interface; wherein said communication component
25 communicates with said external electronic devices via said common software interface
to receive said data from and to send said data and said control signals to said external
electronic devices, wherein said control signals control the operation of respective ones
of said external electronic devices;

30 wherein said processing component processes an operator's input to the
operator input component and said data received by the communication component to
formulate said control signals to be sent by said communication component for
controlling the operation of said external electronic devices;

35 wherein said structural frame of the vehicle is at least partly defined by a
first area and a second area, wherein said first and second areas are different from one

another, wherein said external electronic devices include a first set of external electronic devices located in said first area and a second set of external electrical devices located in said second area;

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wherein said data received by said communication component from said external electronic devices includes a listing of said first and second areas, wherein said listing of said areas is displayed on said integral display, wherein an operator's input to said operator input component includes a selection of one of said areas; and

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wherein said data sent to said external electronic devices from said communication component includes said selection of one of said listed areas, and wherein said selection establishes operational control of respective ones of said external electronic devices in said one of said listed areas by said control signals sent from said communication component.

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19. A method of controlling external electronic devices located in a first surrounding environment via a portable electronic controller, wherein said external electronic devices include a first external electronic device, the method comprising:

5 positioning said portable electronic controller in said first surrounding environment;

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communicating with said first external electronic device via a communication component of said portable electronic controller to send data to and to receive data from said first external electronic device, wherein said external electronic devices and said communication component have a common software interface enabling such communication;

displaying said received data on an integral display of said portable
15 electronic controller;

processing an operator's input to an operator input component of said
electronic controller in a processing component of said electronic controller to formulate
a control signal, wherein said operator's input is based on said displayed received data;

20 sending said formulated control signal via said communication component
to said first external electronic device for controlling the function thereof.

20. The method of claim 19, wherein said operator's input represents a
preferred setting of said first external electronic device, and further comprising:

storing said operator's input in a data storage component of said portable
5 electronic controller;

repositioning said electronic controller to a second surrounding
environment that is different than said first surrounding environment and includes other
external electronic devices, including a second external electronic device, wherein said
10 first and second external electronic devices have an equivalent function; and

sending another formulated control signal to said second external
electronic device for controlling the equivalent function thereof, wherein said another
formulated control signal is formulated based upon said stored operator's input
15 representing said preferred setting.